AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A method, comprising:

providing, from a link [[a]] receiver, a plurality of data credits to a link transmitter;

allocating at the link transmitter the plurality of data credits to a plurality of logical channels;

transmitting a plurality of packets from the link transmitter to the link receiver on an ingress link, wherein the ingress link has a forward link and a reverse link, and wherein the plurality of packets are transmitted on the forward link;

storing the plurality of packets in a plurality of receiver buffers at the link receiver;

updating a free buffer pool at the link receiver with a number of free receiver buffers available to receive new packets from the transmitter, the number of free receiver buffers represented by a corresponding number of the data credits; [[and]]

using a link receiver flow control algorithm in communication with the receive buffers to monitor emptying of the receive buffers and to update to the data credits contained in the free buffer pool;

using the link receiver flow control algorithm to transmit ~~transmitting~~ a flow control packet from a link receiver to the link transmitter on the reverse link if the free buffer pool contains additional data credits and the reverse link is idle, wherein the flow control packet comprises the additional data credits; and

wherein the link receiver flow control algorithm decreases the free buffer pool at the link receiver by a value corresponding to the data credits contained in the flow control packet, and increases the data credits available to the transmitter at the link transmitter in accordance with the data credits contained in the flow control packet.

2. (Previously Presented) The method of claim 1, wherein the link receiver updating the free buffer pool at the link receiver comprises the link receiver updating the free buffer pool as one of the plurality of packets is transmitted out of the plurality of receiver buffers.

3. (Original) The method of claim 1, wherein the flow control packet notifies the link transmitter of an empty portion of the plurality of receiver buffers.

4. (Original) The method of claim 1, wherein one of the plurality of data credits corresponds to one of the plurality of receiver buffers being empty.

5. (Previously Presented) The method of claim 1, further comprising selecting from the plurality of logical channels to allocate the additional data credits at the link transmitter.

6. (Cancelled)

7. (Original) The method of claim 1, wherein the link transmitter and the link receiver operate in a switch fabric network.

8. (Original) The method of claim 7, wherein the switch fabric network is one of an Infiniband network and a Serial RapidIO network.

9. (Currently Amended) A switch, comprising:

a plurality of receiver buffers at a link receiver coupled to receive a packet from a link transmitter on an ingress link having a forward link and a reverse link after the link transmitter allocates a plurality of data credits to a plurality of logical channels, wherein the packet is stored in the plurality of receiver buffers when received by the link receiver;

a free buffer pool at the link receiver; [[and]]

a link receiver flow control algorithm, wherein the link receiver flow control algorithm transmits a flow control packet to the link transmitter on the reverse link if the free buffer pool contains additional data credits and the reverse link is idle, wherein the flow control packet comprises the additional data credits, and wherein the additional data credits represent ones of the receiver buffers at the link receiver that are available to receive new packets; and

the link receiver flow control algorithm adapted to increase and decrease the free buffer pool in accordance with a number of the additional data credits that become available at the link receiver, and to increase the number of the data credits accordingly at the link transmitter.

10. (Original) The switch of claim 9, wherein the flow control packet notifies the link transmitter of an empty portion of the plurality of receiver buffers.

11. (Original) The switch of claim 9, wherein one of the plurality of data credits corresponds to one of the plurality of receiver buffers being empty.

12. (Previously Presented) The switch of claim 9, wherein the link transmitter selects to which of the plurality of logical channels to allocate the additional data credits.

13. (Cancelled)

14. (Cancelled)

15. (Original) The switch of claim 14, wherein the switch fabric network is one of an Infiniband network and a Serial RapidIO network.

16. (Currently Amended) A method of using a computer-readable medium ~~encoded with computer executable instructions for instructing a processor to perform a method of updating~~ to update a link transmitter, the ~~instructions~~ method comprising:

providing, from a link [[a]] receiver, a plurality of data credits to a link transmitter;

allocating at the link transmitter the plurality of data credits to a plurality of logical channels;

transmitting a plurality of packets from the link transmitter to the link receiver on an ingress link, wherein the ingress link has a forward link and a reverse link, and wherein the plurality of packets are transmitted on the forward link;

storing the plurality of packets in a plurality of receiver buffers at the link receiver;

using a flow control algorithm to increase a count of data credits in ~~updating~~ a free buffer pool at the link receiver when one or more of the receiver buffers becomes free to receive a new packet; and

using the flow control algorithm to transmit ~~transmitting~~ a flow control packet from a link receiver to the link transmitter on the reverse link if the free buffer pool contains additional ones of the data credits and the reverse link is idle, wherein the flow control packet comprises the additional ones of the data credits; and

using the flow control algorithm to decrease the count of data credits in the free buffer pool of the link receiver, while using the flow control packet to update the number of the data credits available for use by the link transmitter.

17. (Currently Amended) The ~~computer-readable medium~~ method of claim 16, wherein the link receiver updating the free buffer pool comprises the link receiver updating the free buffer pool as one of the plurality of packets is transmitted out of the plurality of receiver buffers.

18. (Currently Amended) The ~~computer-readable medium~~ method of claim 16, wherein the flow control packet notifies the link transmitter of an empty portion of the plurality of receiver buffers.

19. (Currently Amended) The ~~computer-readable medium~~ method of claim 16, wherein one of the plurality of data credits corresponds to one of the plurality of receiver buffers being empty.

20. (Currently Amended) The ~~computer-readable medium~~ method of claim 16, further comprising selecting from the plurality of logical channels to allocate the additional data credits at the link transmitter.

21. (Cancelled)

22. (Currently Amended) The ~~computer-readable medium~~ method of claim 16, wherein the link transmitter and the link receiver operate in a switch fabric network.

23. (Currently Amended) The ~~computer-readable medium~~ method of claim 20, wherein the switch fabric network is one of an Infiniband network and a Serial RapidIO network.